

Missouri Freight Transportation

Economy on the Move

Truck Freight



Truck Industry

The Missouri highway system is the longest state road system in the Mid-West spanning 32,800 miles and crossing over 10,224 bridges. The highway freight industry that relies on this system currently employs 39,867 workers; 38,491 in general, specialized, and intercity freight trucking positions and 1,376 in road transportation support activities. Warehousing and storage industries are closely related to freight shipping activities and employ over 16,500 workers in the state.

An Economic Driver

The trucking industry employment has a large impact on Missouri's economy generating an estimated \$5.1 billion annually in Gross State Product, \$2.6 billion in personal income and \$172 million in new net Missouri general revenues. The more than 39,800 direct workers generate an estimated 33,900 indirect and induced spin-off jobs annually in Missouri through purchases of industry intermediate inputs and employee consumer spending.

Commodity Flows

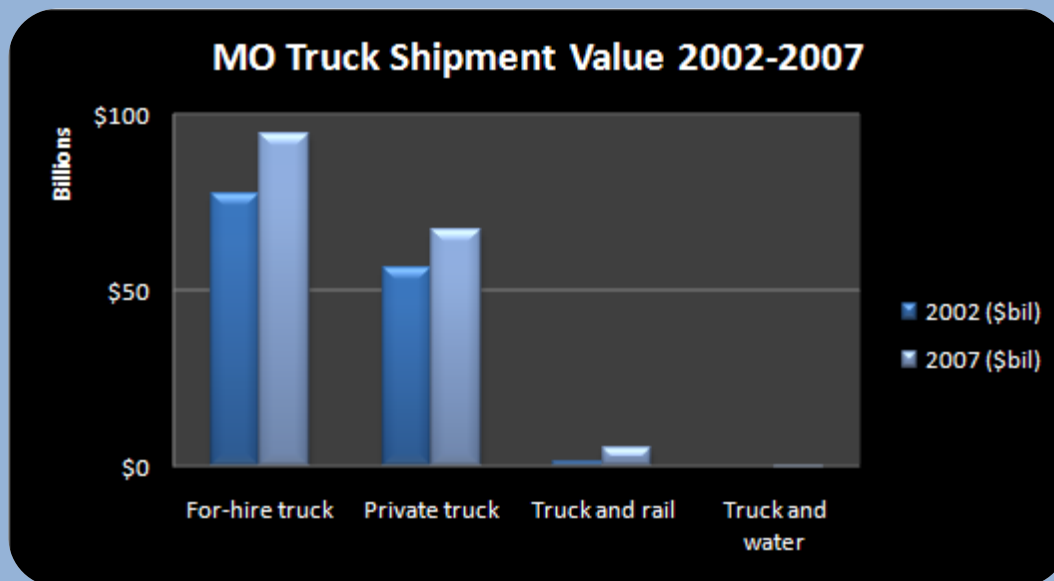
Shipment values and tonnage for all modes combined increased in Missouri by roughly 20% over the five years surveyed. Truck shipments accounted for over 74% of the value and over 78% of the total tonnage. Over \$162 billion in Missouri commodities are shipped by truck. Pharmaceuticals, mixed freight, and chemicals represent nearly 22% of the total value of those Missouri commodities. Over \$110 billion are imported by truck to Missouri. High value imports include pharmaceuticals, motorized vehicles and parts, and mixed freight.



Trends in Truck Shipments 2002-2007

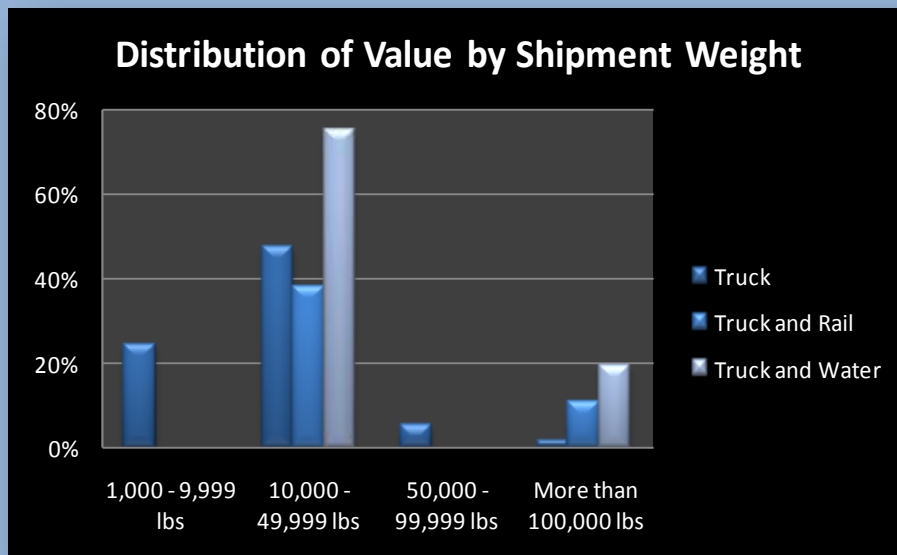
Shipment values and tonnage for all modes combined increased in Missouri by roughly 20% over the five years surveyed. Missouri companies shipped nearly \$226 billion and 305 million tons of commodities throughout the U.S. Truck shipments accounted for over 74% of the value and over 78% of the tonnage or \$167.7 billion and 240.7 million tons.

The Commodity Flow Survey breaks out truck shipping into for-hire and private truck only modes and truck intermodal modes (truck/rail, truck/water). The most recent survey reports a significant increase in truck only shipping values (20%) and tonnage (21%). Shipping increases occurred across 30 commodity classifications. Substantial dollar gains were found in chemical products, meat/fish, fuel oils, coal/petroleum products, and grain/alcohol/tobacco shipments. Likewise, the intermodal truck and rail shipments increased substantially in both value (334%) and tonnage (421%). Truck and water intermodal, previously suppressed in 2002, now shows a growth in value to \$149 million and 5.9 million tons.



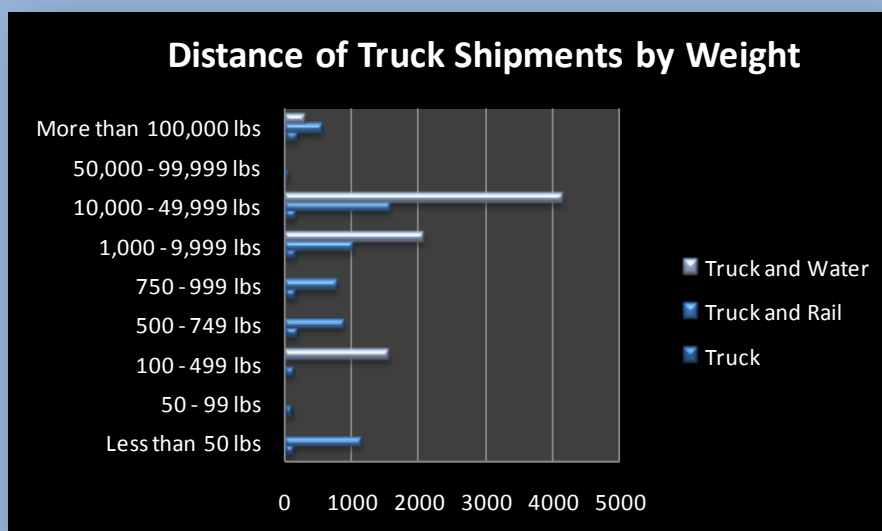
Shipment Weights

The distribution of shipment weight by truck mode primarily falls into four categories. The 10 to 50 thousand lbs group represents about 51% of total truck tonnage and 47% of the total value.

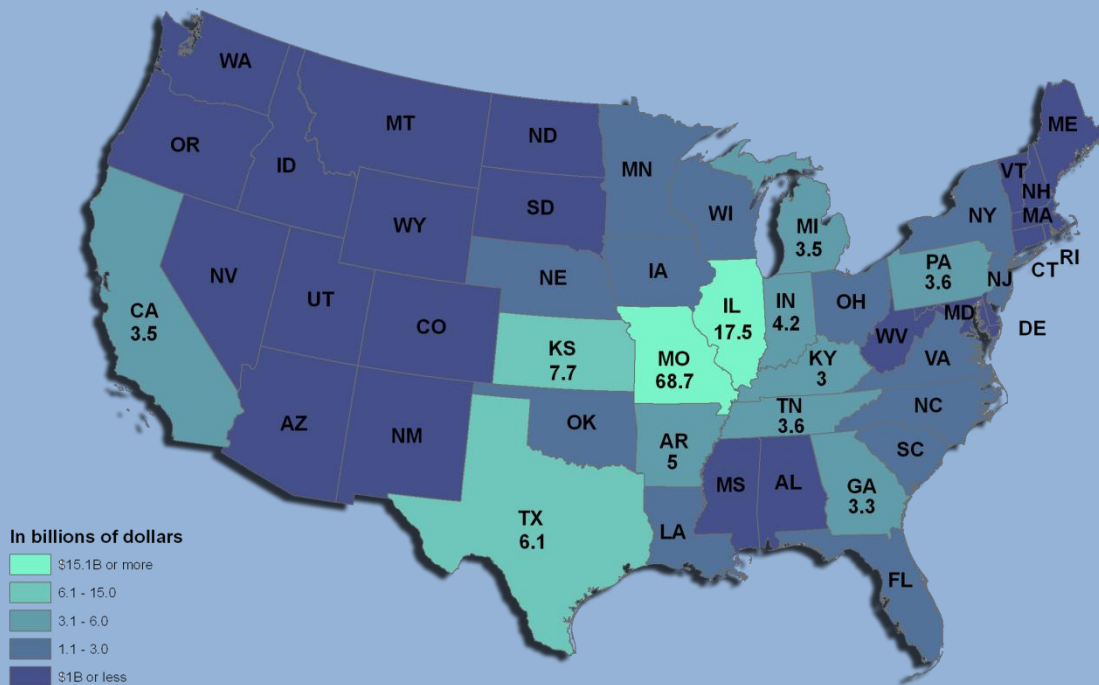


Shipment Distance

Missouri Truck-Only shipments average 153 miles to destination. Truck and Rail intermodal averages 795 miles and Truck and Water intermodal averages 1,760 miles to destination.



Missouri's Truck Shipments to States (\$B)

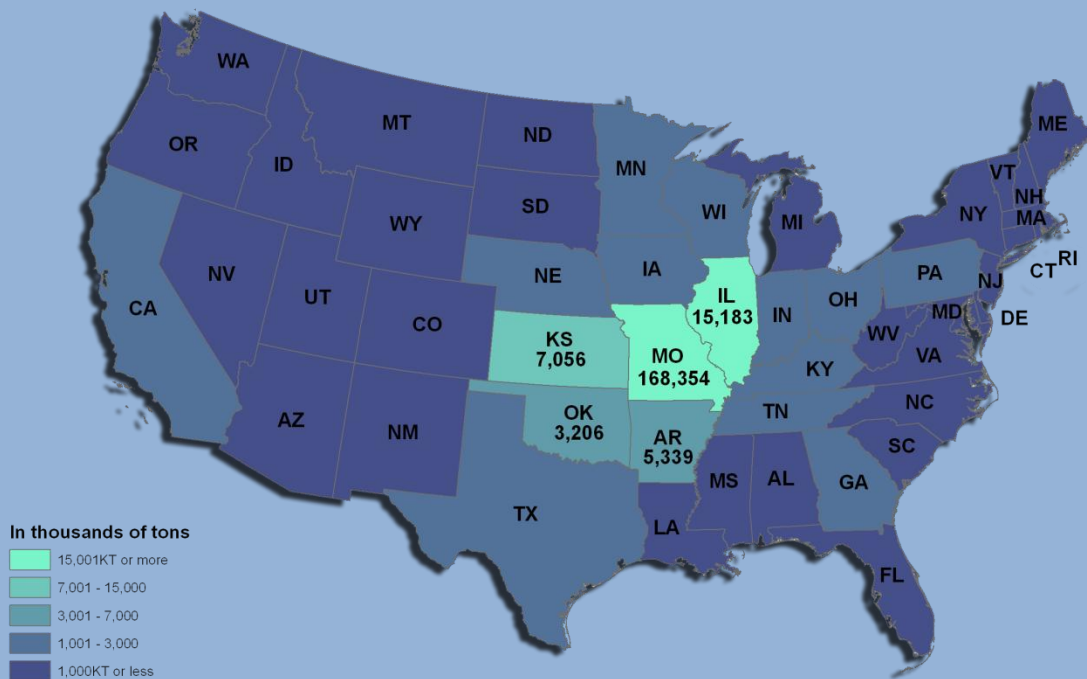


Missouri's higher value truck shipments are distributed mainly in the central region with Illinois receiving nearly 11% of the total trucking shipment value. Shipments within Missouri account for over 42% of value. Higher value intermodal shipments by truck and water combinations move predominately to California (\$12M) and Missouri (\$3M). Higher value intermodal truck and rail shipments move mainly to the coastal states of California, Texas, Georgia, and Florida.

Destination	Value(\$bil)
Missouri	68.70
Illinois	17.46
Kansas	7.65
Texas	6.14
Arkansas	5.04
Indiana	4.24
Pennsylvania	3.62
Tennessee	3.60
California	3.53
Michigan	3.46



Missouri's Truck Shipments to States (Kilotons)

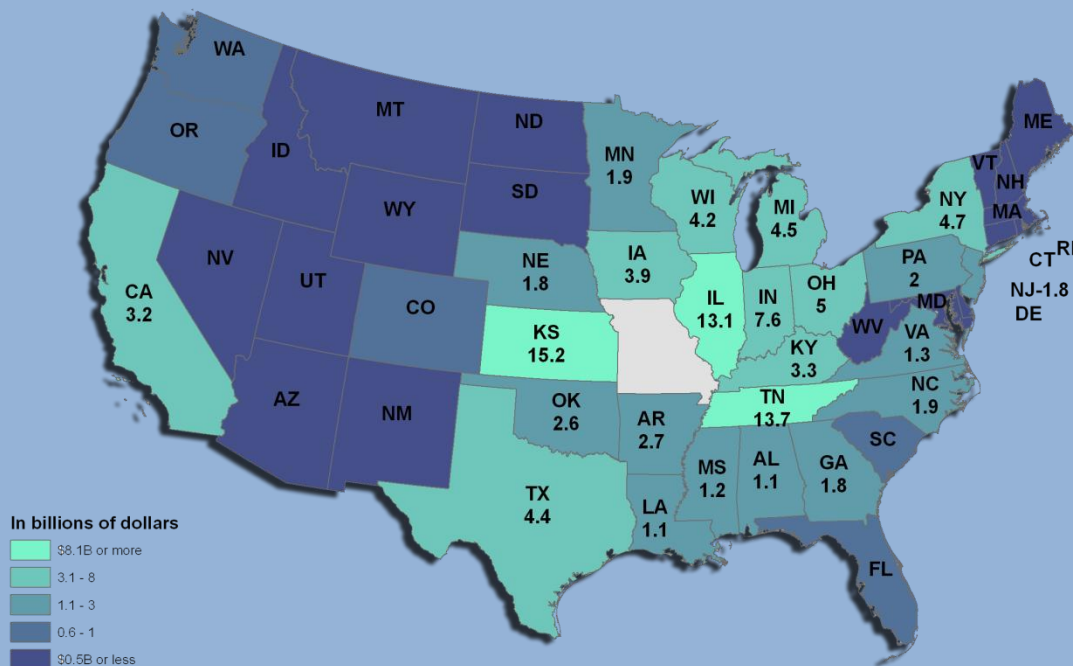


Missouri's heaviest truck cargo tends to stay close to home with destinations mainly in the surrounding states and within Missouri itself. Intermodal shipments by truck and water delivered the most tonnage in commodities to Louisiana (1,333 KT) and Missouri (1,277 KT). States receiving the highest number of tonnage via truck and rail intermodal included Texas (524 KT), California (518 KT), Arkansas (207 KT), and Oklahoma (142 KT).

Destination	Tons (thous)
Missouri	168,354
Illinois	15,183
Kansas	7,056
Arkansas	5,339
Oklahoma	3,206
Texas	2,877
Indiana	2,368
Tennessee	2,293
Kentucky	1,778
Iowa	1,762



Missouri's Truck Imports from States (\$B)

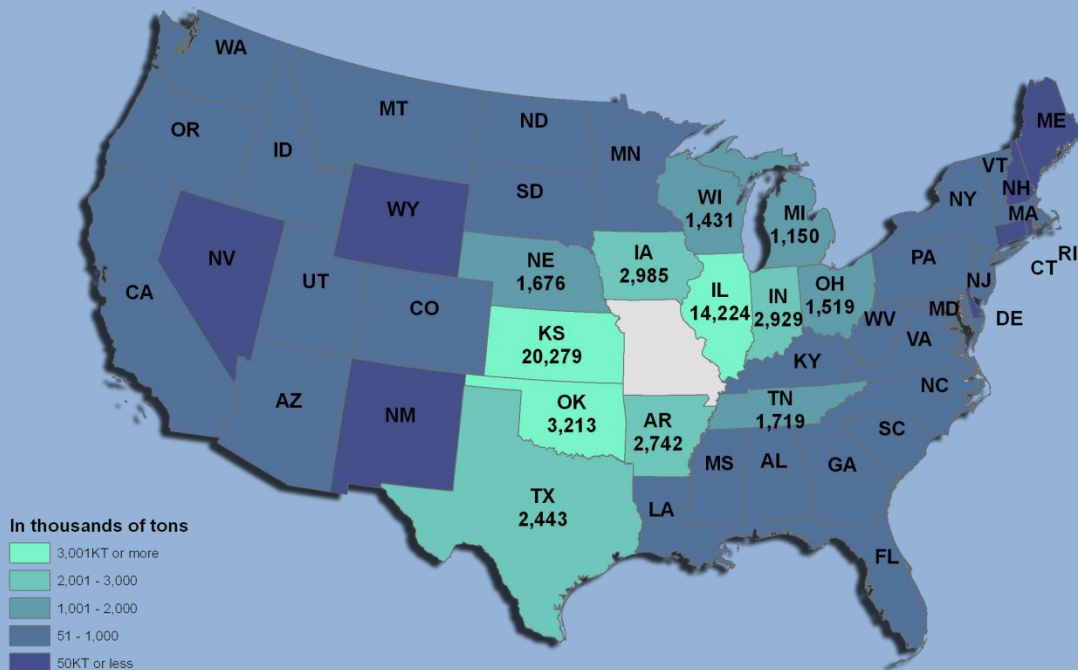


Missouri receives the highest dollar value of truck shipments from the central and eastern part of the U.S. with Kansas, Illinois, and Tennessee delivering a large portion of those commodities. West Virginia is a major truck and water intermodal shipper which transfers fuel oil to Missouri. Michigan (\$2.1B) along with California, Indiana, and Washington top the list of intermodal truck and rail shippers to Missouri.

Origin	Value(\$bil)
Kansas	15.15
Tennessee	13.68
Illinois	13.14
Indiana	7.63
Ohio	4.98
New York	4.72
Michigan	4.46
Texas	4.42
Wisconsin	4.15
Iowa	3.91



Missouri's Truck Imports from States (Kilotons)

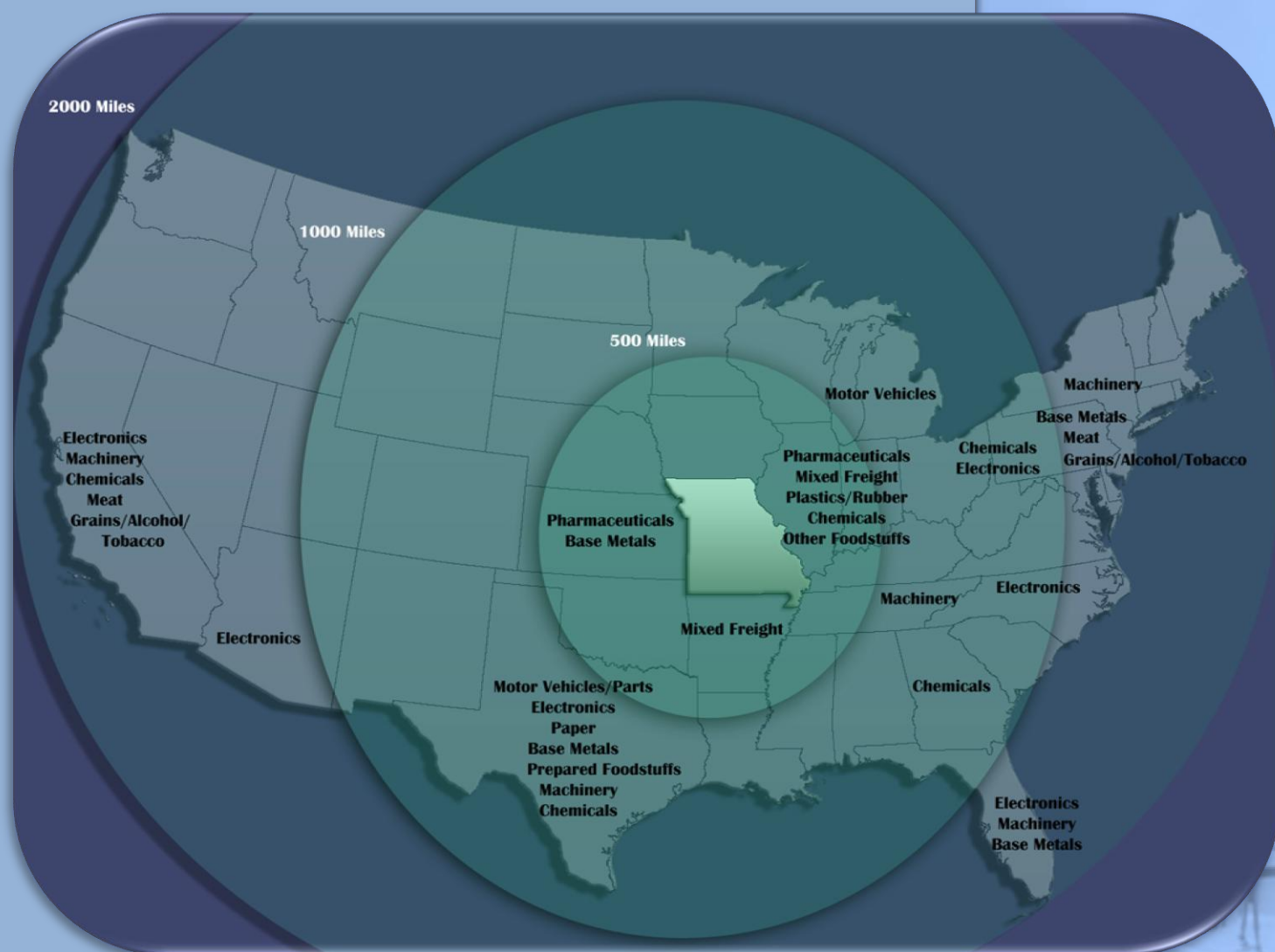


Missouri receives the highest tonnage of commodities by truck from the central part of the U.S. Kansas ships the highest tonnage to Missouri, mainly in the form of sand, mixed freight, and gravel. West Virginia is also the top truck and water intermodal shipper to Missouri by tonnage. Michigan, Kansas, and Ohio top the list of intermodal truck and rail shippers to Missouri.

Origin	Tons (thous)
Kansas	20,279
Illinois	14,224
Oklahoma	3,213
Iowa	2,985
Indiana	2,929
Arkansas	2,742
Texas	2,443
Tennessee	1,719
Nebraska	1,676
Ohio	1,519

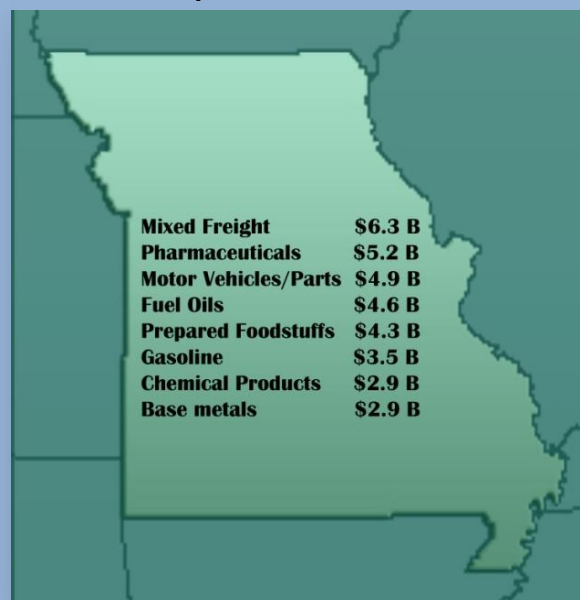


Missouri's Top Truck Commodity Shipments to States



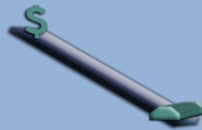
Truck Shipments within Missouri

Over \$162 billion in Missouri commodities are shipped by truck only modes. Higher value shipments average 192 miles to destination while higher tonnage shipments average 86 miles. Pharmaceuticals, mixed freight, and chemicals make nearly 22% of the total value of Missouri commodities shipped by truck. These high dollar commodities predominantly move to the surrounding states and east. Gravel, nonmetallic minerals, and prepared foodstuff make up 47% of the total tonnage shipped from Missouri with the majority of tons staying in the central region.



Top Missouri Commodities Shipped to States

MO Commodities	Value(\$bil)
Pharmaceutical products	12.77
Mixed freight	11.75
Chemical products and preparations, nec	10.60
Motorized and other vehicles (including parts)	9.66
Other prepared foodstuffs and fats and oils	9.30
Miscellaneous manufactured products	9.21



MO Commodities	Tons (thous)
Gravel and crushed stone	70,035
Nonmetallic mineral products	28,911
Other prepared foodstuffs and fats and oils	9,864
Wood products	6,986
Fuel oils	6,132
Animal feed and products of animal origin, nec	5,905

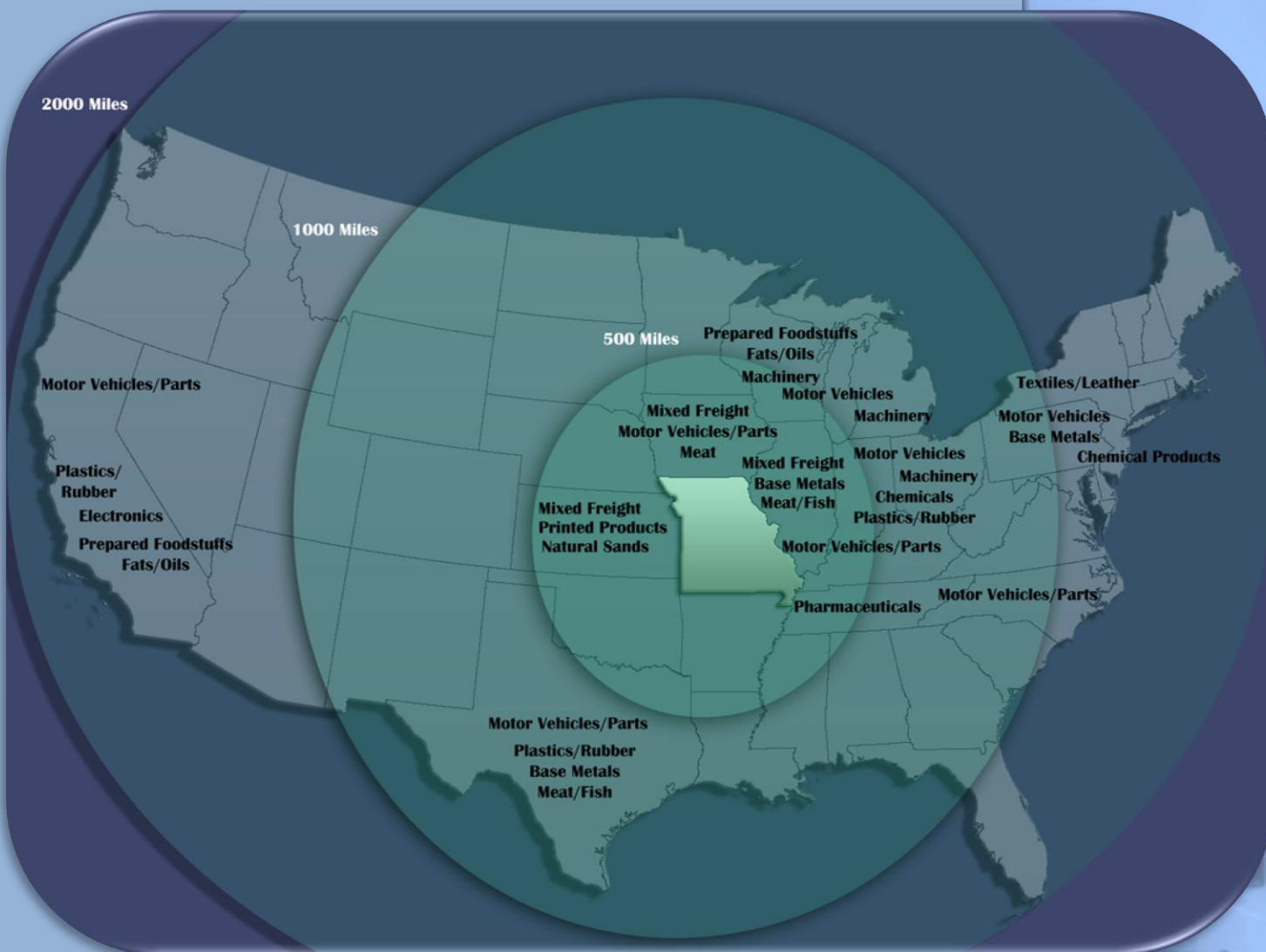
Missouri's Intermodal Shipments to States

Missouri truck and water intermodal shipments account for \$149 million and 5.1 million tons of which are made up of primarily Machinery, Waste/Scrap, Sand, and Chemicals. This mode averages 1,760 miles to destination.

Missouri truck and rail intermodal shipments account for \$5.3 billion and 5.9 million tons. Motorized vehicles and parts, paper/paperboard articles, and machinery constitute over 55% of the total value of shipments. Waste/scrap, motorized vehicles and parts, and chemical products represent the commodities with the highest tonnage shipped by this mode. This mode averages 795 miles to destination.



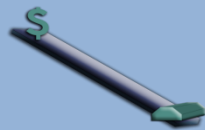
Missouri's Top Truck Commodity Imports from States



Over \$110.7 billion in commodities are imported by truck only modes to Missouri. Higher value shipments average 387 miles to destination while higher tonnage shipments average 137 miles. Pharmaceuticals, motorized vehicles and parts, and mixed freight represent Missouri's top truck imports by value. Pharmaceuticals come in from Tennessee, Kentucky, and Iowa. Kansas, Illinois and other nearby states supply mixed freight. The northeast states of Michigan, Indiana, Ohio, and Wisconsin supply much of the motorized vehicles and parts. Kansas is the only supplier of natural sand imports to Missouri which makes up nearly 15% of the total tonnage shipped into the state.

Top Missouri Commodities Imported from States

MO Imported Commodities	Value(\$bil)
Pharmaceutical products	10.96
Motorized and other vehicles (including parts)	10.92
Mixed freight	8.22
Other prepared foodstuffs and fats and oils	5.73
Plastics and rubber	5.70
Machinery	4.64



MO Imported Commodities	Tons (thous)
Natural sands	9654
Other prepared foodstuffs and fats and oils	4021
Nonmetallic mineral products	3199
Base metal	2715
Mixed freight	2638
Animal feed and products of animal origin, nec	2228

Missouri's Intermodal Imports from States

Missouri truck and water intermodal imports are made up of fuel oils, coal fertilizers, transportation equipment, base metals, and waste/scrap. This mode averages 917 miles to destination for fuel oils and 81 miles for coal. Origin states are mainly from the central region and West Virginia.

Missouri truck and rail intermodal imports account for \$7.4 billion and 3.4 million tons. Motorized vehicles and parts and base metals, mainly from Michigan and Indiana, constitute over 20% of the total value of shipments or \$1.5 billion. Motorized vehicles and parts and nonmetallic minerals represent the commodities with the highest tonnage imported by this mode.



For-Hire Trucking vs. Private Trucking

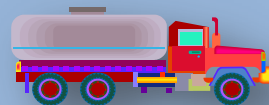
Truck only shipments are further broken out by for-hire trucking and private trucking categories. These two classifications differ in many ways. For-hire trucking typically ships about 5.6 times further than private trucking and carries over 2 times the value per ton (\$1,012 per ton). Private trucking shipments tend to deliver locally within Missouri or just across the state border with nearly 1.5 times the amount of annual shipments than for-hire trucks. Private trucks carry a slightly lighter shipment on average, but deliver 46% more tons of commodities as a whole.

The top Missouri commodities by value differ for the two groups as well. For-hire trucks carry more pharmaceuticals (\$11.8 B), chemicals (\$8.8 B), miscellaneous manufactured products (\$7.0 B), machinery (\$6.5 B), and electronics (\$6.1 B). Private trucks carry more mixed freight (\$8.7 B), motorized vehicles and parts (\$4.9 B), fuel oils (\$4.7 B), plastics/rubber (\$3.8 B), and gasoline (\$3.8 B). Top commodities by tonnage differ very little between the groups, however private trucks carry a much higher volume of gravel and nonmetallic mineral products.

For-Hire Trucking



Private Trucking

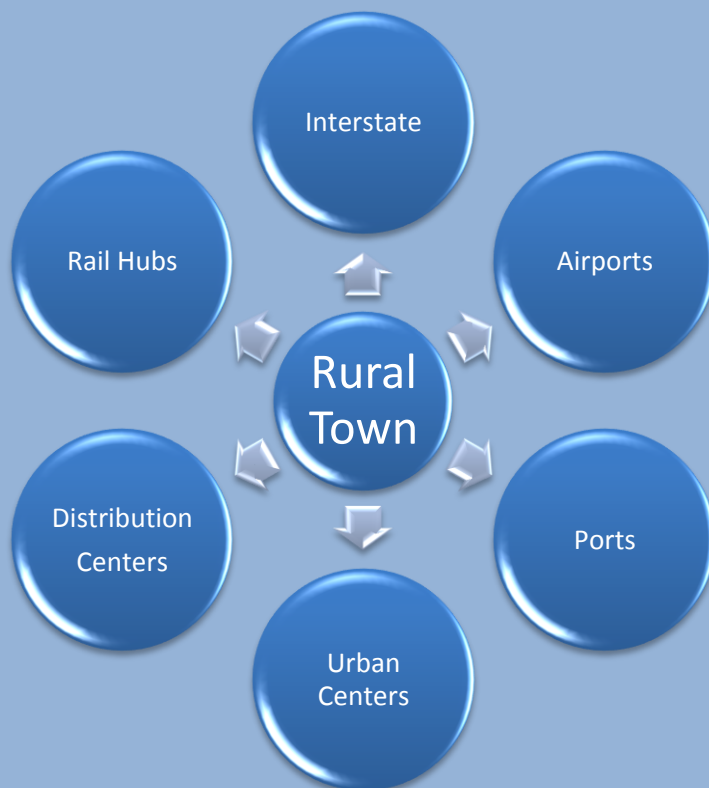


Transportation Enhancements – Truck Freight

Scenario: Rural Business Attraction

Investment in transportation infrastructure can reap many positive benefits for industry and consumers alike. Road enhancements, even in rural locations, can increase access to resources and attract businesses and labor to the area.

A sample study performed in a rural Missouri community examined the effect of a road improvement which would increase the average truck speed by 10 mph between the community and the nearest urban center. Results from the transportation model estimated a direct impact of \$3.2 million (0.2% increase to community output) from potential business attraction and an additional \$6.7 million in indirect and induced purchases over the life of the project.



Sources

U.S. Census, American Fact Finder Commodity Flow Survey
Regional Economic Models Incorporated
TREDIS Transportation Modeling
United States Railroad Retirement Board
U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Note

The recent release of the American Fact Finder *Commodity Flow Survey* by the U.S. Census describes the values, tonnage, and distance of state to state shipments. The information updates a 2002 survey and includes detailed estimates by modal activity (truck/barge/rail), commodity, and industry. Intermodal activities (ie. truck and water, truck and rail) are also estimated using this survey. While origins and destinations are cited in this report, data collection limitations measure the origin of movement and may not represent the commodity origin of production or final destination of the commodity.

Prepared by Tony Brite

